### Message

From: Hagerman, Paul [HagermanPR@cdmsmith.com]

**Sent**: 6/26/2017 8:09:48 PM

To: Donovan, Betsy [Donovan.Betsy@epa.gov]

CC: Darpinian, Amy F NWK (Amy.F.Darpinian@usace.army.mil) [Amy.F.Darpinian@usace.army.mil]

Subject: RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

Attachments: RAOs and Remedial Alternatives Comments.docx

Please find our comments pasted below and also in the attached word file. Our comments are indented and in italics.

# **RAOs**

Prevent or minimize current and potential future unacceptable risks to human and ecological receptors through direct contact or ingestion of contaminated soil.

Control source areas to prevent or minimize impacts to groundwater.

Comment: Source areas should also control surface runoff to surface water.

Prevent or minimize current and potential future unacceptable risks to human receptors through ingestion of contaminated groundwater.

Restore groundwater to its expected beneficial use to the extent practicable by reducing contaminant concentrations below the more stringent of federal MCLs and NJ GWQS.

# **Remedial Alternatives**

Soil (no future use scenario)

No Action

Site Controls

Comment: It is not clear how this alternative will be protective in the long-term.

Site Controls and Capping of Selected Areas to Reduce Overall Risk

Site Controls, Consolidation of Selected Materials, and Capping of Selected Areas to Reduce Overall Risk

Site Controls, Excavation, and Off-Site Disposal of Selected Areas to Reduce Overall Risk

Soil (residential future use scenario)

Some clarification is needed - are these in separate areas outside of the landfill? It is presumed this is meant to apply to the ball field and shooting range? If the areas are with the landfill limits, then this setup makes no sense.

Site Controls and Capping of All Landfill Material in the Developable Area of the Site

Excavation and Off-Site Disposal of All Landfill Material in the Developable Area of the Site

#### Groundwater

Comment: If their intention is just to treat TP-09, the range of alternatives seems to be reasonable. However, there is a concern to restricting the alternative to only one treatment technology at a time, it may not achieve the treatment objective for multiple contaminants coming from a source area. Using a treatment train with multiple treatment technologies may be more appropriate.

Until more specific information regarding the alternatives is available (e.g., the contaminants and areas to be treated), it is not possible to comment on the effectiveness of the alternatives. To date they have not demonstrated how MNA would be application to all of the site contaminants though.

No Action

Monitored Natural Attenuation (MNA) with Source Control

Biological Treatment and MNA with Source Control

In-Situ Chemical Oxidation and MNA with Source Control

Containment Using a Permeable Reactive Wall and MNA with Source Control

Note that by "source control" in the groundwater remedial alternatives, we are referring to the buried materials observed at Test Pit TP-09, upgradient of well MW-3, or similar buried source materials.

Paul Hagerman, P.E.

CDM Smith 110 Fieldcrest Avenue, #8 6th Floor Edison, NJ 08837

phone: (732) 225 7000 (operator) phone: (732) 590 4663 (direct dial)

cell phone: (917) 941 4010

From: Donovan, Betsy [mailto:Donovan.Betsy@epa.gov]

Sent: Thursday, June 22, 2017 5:40 PM

To: Vaughn, Stephanie <Vaughn.Stephanie@epa.gov>; Griffiths, Rachel <griffiths.rachel@epa.gov>; Sivak, Michael <Sivak.Michael@epa.gov>; Fajardo, Juan <Fajardo.Juan@epa.gov>; Clemetson, Michael <Clemetson.Michael@epa.gov>; Jill McKenzie@dep.nj.gov) <Jill.McKenzie@dep.nj.gov>; Hagerman, Paul <HagermanPR@cdmsmith.com>; Darpinian, Amy F NWK (Amy.F.Darpinian@usace.army.mil) <Amy.F.Darpinian@usace.army.mil>; George Molnar (George\_Molnar@fws.gov) <George\_Molnar@fws.gov>

Cc: Carpenter, Angela < Carpenter. Angela@epa.gov>

Subject: RE: Rolling Knolls - proposed RAOs and Remedial Alternatives

Reminder – please send comments on proposed RAOs and remedial alternatives by June 26th. Thank you.

From: Donovan, Betsy

Sent: Monday, June 12, 2017 10:55 AM

To: Vaughn, Stephanie <\foatsuaghn.Stephanie@epa.gov>; Griffiths, Rachel <\foatsiriffiths.rachel@epa.gov>; Sivak, Michael <\foatsiriffiths.rachel@epa.gov>; Sivak, Michael <\foatsiriffiths.rachel@epa.gov>; Sivak, Michael <\foatsiriffiths.rachel@epa.gov>; Sivak, Michael <\foatsiriffiths.rachel@epa.gov>; Clemetson, Michael@epa.gov>; Jill.McKenzie@dep.nj.gov>; 'Hagerman, Paul' <\foatsiriffiths.rachel@epa.gov>; Sivak, Michael <\fo

Cc: Carpenter, Angela < Carpenter. Angela@epa.gov>

Subject: FW: Rolling Knolls - proposed RAOs and Remedial Alternatives

Rolling Knolls Reviewers – Please see the following message with the PRPs proposed Remedial Action Objectives (RAOs) and Remedial Alternatives which will be included in the Feasibility Study. Please provide comments by June 26<sup>th</sup>. If you would like to discuss any comments prior to submitting a response, please let me know. Thank you for your assistance.

From: John Persico [mailto:JPersico@Geosyntec.com]

**Sent:** Monday, June 12, 2017 8:15 AM

To: Donovan, Betsy < Donovan. Betsy@epa.gov>

Cc: Ricci, Richard F. <a href="mailto:ref]Ricci@lowenstein.com">Richard F. <a href="mailto:ref]Ricci@lowenstein.com">Richard F. <a href="mailto:ref]Ricci@lowenstein.com">Richard F. <a href="mailto:ref]Ricci@lowenstein.com">Richard T. Hughes <a href="mailto:ref]Ricci@lowenstein.com">Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Ricci@lowenstein.com</a>; Robert A. Malinoski</a><a href="mailto:ref]Ricci@lowenstein.com">Ricci@lowenstein.com</a>; Robert A. Malinoski</a><a href="mailto:ref]Ricci@lowenstein.com">Ricci@lowenstein.com</a>; Robert A. Malinoski</a><a href="mailto:ref]Ricci@lowenstein.com">Ricci@lowenstein.com</a>; Sofina Mirza-Reid</a><a href="mailto:ref]Ricci@lowenstein.com">Ricci@lowenstein.com</a>; Sofina Mirza-Reid</a><a href="mailto:ref]Ricci@lowenstein.com">Ricci@lowenstein.com</a>; Steven Poirier</a> <a href="mailto:ref]Ricci@lowenstein.com</a>; Steven Poirier</a>

Subject: Rolling Knolls - proposed RAOs and Remedial Alternatives

Betsy, as I indicated in my email on June 8, 2017, we are providing new proposed Remedial Action Objectives (RAOs) and Remedial Alternatives for review by USEPA. These are based on your comments on the RAOs and Remedial Alternatives in the Development and Screening of Remedial Alternatives Technical Memorandum (DSRA Tech Memo) and on subsequent discussions between USEPA and the Rolling Knolls Group.

### **RAOs**

- 1. Prevent or minimize current and potential future unacceptable risks to human and ecological receptors through direct contact or ingestion of contaminated soil.
- 2. Control source areas to prevent or minimize impacts to groundwater.
- 3. Prevent or minimize current and potential future unacceptable risks to human receptors through ingestion of contaminated groundwater.
- 4. Restore groundwater to its expected beneficial use to the extent practicable by reducing contaminant concentrations below the more stringent of federal MCLs and NJ GWQS.

# **Remedial Alternatives**

# Soil (no future use scenario)

1. No Action

- 2. Site Controls
- 3. Site Controls and Capping of Selected Areas to Reduce Overall Risk
- 4. Site Controls, Consolidation of Selected Materials, and Capping of Selected Areas to Reduce Overall Risk
- 5. Site Controls, Excavation, and Off-Site Disposal of Selected Areas to Reduce Overall Risk

### Soil (residential future use scenario)

- 1. Site Controls and Capping of All Landfill Material in the Developable Area of the Site
- 2. Excavation and Off-Site Disposal of All Landfill Material in the Developable Area of the Site

#### Groundwater

- 1. No Action
- 2. Monitored Natural Attenuation (MNA) with Source Control
- 3. Biological Treatment and MNA with Source Control
- 4. In-Situ Chemical Oxidation and MNA with Source Control
- 5. Containment Using a Permeable Reactive Wall and MNA with Source Control

Note that by "source control" in the groundwater remedial alternatives, we are referring to the buried materials observed at Test Pit TP-09, upgradient of well MW-3, or similar buried source materials.

Please let me know if you have any questions or want to discuss these.

John L. Persico, P.G. Principal 609 493 9008 (office) 609 903 6227 (cell)

